Journal of Public Health

EDITORIALS

Historical Epidemiology

IN THE history of public health, epidemics occupy a prominent place among the situations that precipitated action in the interest of the community's health. Faced with problems of epidemic disease, communities have acted in terms of some prevailing concept of the nature of disease. On the primitive level of knowledge, such action is generally couched in supernatural terms. For thousands of years, epidemics were looked upon as divine judgments on the sins of mankind, and it was believed that these punishments were to be avoided by appeasing the wrathful gods. Alongside this theurgical theory of disease, however, there gradually developed the idea that pestilence is due to natural causes involving physical, biological, and social factors—causes that can be studied rationally by the human brain and hand. Beginning with the efforts of the Greeks to create a rational scientific theory of disease causation, men have endeavored to combine observations, experimental facts, speculations and theoretical inferences into theories that would explain the occurrence of communicable diseases and provide a rationale for their prevention and control. The history of disease and the history of epidemiology are, moreover, basic to an understanding of the development of community action in the interest of health. Perhaps more than other investigators of biological phenomena, epidemiologists cannot divorce themselves from consideration of events long past. They must, therefore, lean partly on the historians of epidemics.

While epidemics have been described from very early times, efforts to consider disease historically are quite recent. The founder of historical epidemiology was the medical historian Justus Friedrich Karl Hecker (1795-1850) of Berlin. His best-known works are his essays on the "Black Death" (1832), the "Dancing Mania" (1832), and the "English Sweat" (1834). These were translated into English with the title "The Epidemics of the Middle Ages" (1844), to which book a reprint of the essay by John Caius on the sweating sickness was added as an appendix. A collective volume of Hecker's writings on catastrophic epidemics of the Middle Ages was published in German posthumously (1865).

Heinrich Haeser (1811-1884), professor of medicine at Jena, Greifswald, and Breslau and one of the most learned physicians of his time, was an accurate historian of epidemics. His "Bibliotheca epidemiographica" (1843), second edition (1862), was followed by a monumental "Geschichte der Epidemischen Krankheiten" (1882), the latter being volume three of the third edition of his "Lehrbuch der Geschichte der Medizin und der Volkskrankheiten" which had first appeared in 1845. The third edition, on the "history of epidemics," contains original citations of many first-hand descriptions of disease from old monkish and municipal sources. Edward B. Krumbhaar, writing in 1947, said: "This work in the richness of the material that it covers and the originality of the author's opinions is one of the most readable of medical histories and still may be studied with profit."

In 1860 another German physician, August Hirsch (1817-1894), professor of medicine in the University of Berlin, published the first volume of the first edition of his "Handbuch der Historisch-Geographischen Pathologie" ("Handbook of Geographical and Historical Pathology"), and 20 years later the first volume of the greatly enlarged second edition was published. The three volumes of this work give the history of diseases, including epidemic diseases, of the whole world from the earliest times. This huge compilation is perhaps the most extensive work on the subject: volume one covers acute infective diseases; volume two chronic infective, toxic, parasitic, septic, and constitutional diseases; and volume three diseases of organs and parts. Hirsch's work was translated into English from the second German edition by Charles Creighton and published in three volumes by the New Sydenham Society in 1883-1886.

Charles Creighton (1847-1927), a medical graduate of Aberdeen and London, was, according to E. Ashworth Underwood, "the greatest British medical scholar of the nineteenth century." Creighton followed his translation of Hirsch with his own great work, "A History of Epidemics in Britain" (two volumes, 1891-1894). Garrison, in 1929, called this compilation "a classic of unimpeachable accuracy" and dubbed its somewhat controversial author, "the founder of modern British epidemiology."

Of the men who came under Creighton's influence, Major Greenwood (1880-1949), professor of epidemiology in the University of London, contributed several important volumes, "Epidemiology, Historical and Experimental" (1932), and "Epidemics and Crowd-Diseases" (1935); Sir William H. Hamer (1862-1936) was the author of a fundamental book, "Epidemiology, Old and New" (1928); and Francis G. Crookshank (1873-1948) wrote papers on "First Principles and Epidemiology" (1920) and a valuable historical study of influenza (1926); Sir Henry Harold Scott (1874-1956) prepared his book, "Some Notable Epidemics" (1934).

Georg Sticker (1860-1960) of Cologne, "the ablest historian of epidemiology in recent times" (Garrison), produced scholarly surveys of the general history of epidemic diseases ("Abhandlungen aus der Seuchengeschichte und Seuchenlehre," two volumes, 1908-1912) and monographs on whooping cough, hay-fever, plague, influenza, cholera, dengue, colds, leprosy and tropical fevers (1896-1925). A contemporary, Friedrich Prinzing (1859-1939), produced a provocative volume, "Epidemics Resulting from Wars" (edited by Harald Westergaard, 1916).

Among recent contributors to historical epidemiology, Charles-Edward Amory Winslow (1877-1957), professor of public health at Yale University, wrote readable narratives of man's struggle for health in his books, "The

Conquest of Epidemic Disease: A Chapter in the History of Ideas" (1943) and "Man and Epidemics" (1952). To list all the past contributors or living workers in the field of historical epidemiology is beyond the scope of this résumé. The deep-moving sea of humanity continues to ebb and flow in varied patterns of health and disease amid changing social conditions. A quotation from the book, "Civilization and Disease" (1943), by Henry E. Sigerist, aptly concludes this brief survey:

"The scientific interpretation of disease is still very young. We still have enormous gaps, and we know that the truth of today may appear as an error tomorrow. Yet we may face the future with confidence because we fill the gaps of our knowledge not with religious dreams or philosophical speculations but with scientific facts. And when we make use of working hypotheses, as we have to do all the time, we know that they are assumptions and we are ready to discard them whenever new facts warrant it. . . . Young as medical science is, it permits us to be very optimistic as to the future. And the ultimate goal of medicine, the eradication of disease, distant as it may be, is no longer Utopian."

(This editorial was prepared by Fred B. Rogers, M.D., M.P.H., professor of preventive medicine, Temple University School of Medicine, Philadelphia, Pa.)

Opinions and Discussions

We have long felt that the Journal should be a forum of reader opinion and discussion. Over the past years this aspect of the Journal has been developing slowly but steadily. The number of Letters to the Editor has increased year by year. Thus a number of our readers reacted strongly to the views of Terris and Payne on the nature, methods, and problems of epidemiology. Others have expressed themselves on various other contributions to the Journal. Such reactions are to be welcomed and we hope that our readers will continue to feel free to write to the Editor. With the two letters that appear in the current issue we close the discussion on epidemiology for the present, and turn to other matters. We are certain that there are others in the public health fold who feel as strongly about their own problems as the epidemiologists do about theirs. As long as the views of our readers are fit to print, and to the extent that space is available, we will continue to present the opinions and discussions of our readers.

LETTERS TO THE EDITOR

To the Editor:

A Critique on the Methods and Scope of Epidemiology

I should like to discuss the article by Terris and the editorial by Payne in the September, 1962, issue, and the letter by Schweitzer in the February, 1963, issue of the American Journal of Public Health. The subject is the methods and scope of epidemiology.

Epidemiology is the only science whose primary concern is the occurrence of disease. In that respect, it is unique. There are principles or fundamental concepts, derived from many sciences, and technics (technics of design, technics of execution, technics of analysis, and technics of presentation), also derived from many sciences, that are employed in studying, or solving problems relating to, the occurrence of disease. Such being the case, is it proper to refer to the principles collectively as